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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/066,270

01/31/2002

Keith W. Holt

01-869

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24319 7590 03/20/2007
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EXAMINER

TORRES, JOSEPH D

ART UNIT

PAPER NUMBER

2133

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

03/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/066,270

Applicant(s)

HOLT, KEITH W.

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10,11,13,23 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 10, 11, 13, 23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. In view of the amendment filed 02/01/2007, the examiner withdraws all prior rejections under 35 USC § 112.

Response to Arguments

2. Applicant's arguments filed 02/01/2007 have been fully considered but they are not persuasive.

The Applicant contends, "In contrast, the distance D Reed-Solomon code of Weng, which, as stated above, the Examiner cites as being equivalent to the CRC metadata of the present invention, merely generates redundancy symbols. (Weng, Abstract).

Nowhere in Weng is it disclosed that said distance D Reed-Solomon code is suitable for comparison with generated CRC for detection of drive anomaly errors. (Weng, Abstract)".

The Examiner disagrees and asserts that that a systematic Reed-Solomon code as taught in Weng is a cyclic code providing redundant check bits. A systematic Reed-Solomon code is CRC code. The Examiner would like to point out that CRC codes are more general than Reed-Solomon codes in that CRC codes include all cyclic codes (such as Reed-Solomon, BCH, etc.) and derivatives of cyclic codes such as punctured and shortened cyclic codes. However, the Applicant is not claiming any specific CRC

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code; hence the CRC code in the Applicant's claim could be any known CRC code including a Reed-Solomon code.

The Applicant contends, "the D Reed-Solomon code of Weng cannot be construed as being equivalent to the CRC metadata of the presently claimed invention", which makes no sense since the Applicant does not specify a specific CRC code (Note: CRC codes are more general than systematic Reed-Solomon codes in that CRC codes include all systematic cyclic codes and derivatives of systematic cyclic codes such as punctured and shortened cyclic codes). The statement is equivalent to saying --an apple cannot be construed as being equivalent to a fruit--. An apple is a fruit. However a particular specified fruit might not be an apple.

The Applicant contends, "Applicant contends that none of the references cited by the Patent Office against the present invention, either alone or in combination, teach"...

"wherein the cyclic redundancy check is generated and managed at a sector level".

Figure 2 in Weng explicitly teaches sector level management of data and redundancy for the data.

The Examiner disagrees with the applicant and maintains all rejections of claims 1, 3-8, 10, 11, 13, 23 and 25-28. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 1, 3-8, 10, 11, 13, 23 and 25-28 are not patentably distinct or non-obvious over the prior art of record in view of the

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references, Idleman; Thomas E. et al. (US 5274645 A, hereafter referred to as Idleman), Weng; Lih-Jyh (US 5265104 A) and Krueger; Mark S. et al. (US 5331646 A, hereafter referred to as Krueger) in view of Iwatani; Sawao (US 6023780 A) as applied in the last office action, filed 12/20/2006. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1, 3-8, 10, 13, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Idleman; Thomas E. et al. (US 5274645 A, hereafter referred to as Idleman) in view of Weng; Lih-Jyh (US 5265104 A) in further view of Krueger; Mark S. et al. (US 5331646 A, hereafter referred to as Krueger).

See the Non-Final Action filed 12/20/2006 for detailed action of prior rejections.

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4. Claims 11 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Idleman; Thomas E. et al. (US 5274645 A, hereafter referred to as Idleman), Weng; Lih-Jyh (US 5265104 A) and Krueger; Mark S. et al. (US 5331646 A, hereafter referred to as Krueger) in view of Iwatani; Sawao (US 6023780 A).

See the Non-Final Action filed 12/20/2006 for detailed action of prior rejections.

Conclusion

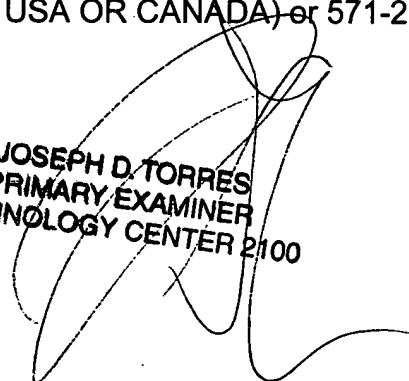
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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